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EXAMINER

ODLAND, DAVID E

ART UNIT

PAPER NUMBER

2662

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/458,768

Applicant(s)

BYERS ET AL.

Examiner

David Odland

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The following is a response to the amendments filed on 03/01/2004.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1,7,10,11,17,20,21,26,28-31,34 and 39-42, are rejected under 35 U.S.C. 102(b) as being anticipated by Onno (USPN 5,170,272), hereafter referred to as Onno.

Referring to claims 1 and 11, Onno discloses a method for asynchronously transporting narrowband and broadband transmissions over a link (narrowband and broadband data is transmitted over a link in ATM format (see figures 1-3 and column 1)) comprising providing at least one host terminal for receiving and transmitting communications over a transmission line (host terminals receive and transmit data over the network (see figures 1-3)), converting narrowband transmissions to and from composite asynchronous transfer mode (ATM) cells by separating data and signaling of each channel into separate byte positions in the composite ATM cells (the narrow band data is converted into ATM cells (see figures 1-3 and columns 2 and 3)) and transferring the composite asynchronous transfer mode (ATM) cells over the transmission link (the ATM cells are transmitted over a link to a receiving end according to the CCITT recommendation (see figure 1 and column 2)), the composite asynchronous transfer mode (ATM) cells including both narrowband and broadband composite cells such that an entire bandwidth of the transmission line is available for both narrowband and broadband transmissions (the switch B.NT2

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switches and transfers both the broadband ATM cells and the narrow band data that is converted into ATM cells (see figures 1-3 and columns 2 and 3)).

Referring to claims 7, 17 and 26, Onno discloses the system discussed above. Furthermore, Onno discloses that the narrowband transmissions include an ATM cell including integrated services digital network (ISDN) data and voice telephony data (the narrowband data include N-ISDN data which according to the standard is used for transmitting voice calls (see column 1 and figures 1-3)).

Referring to claims 10 and 20, Onno discloses the system discussed above. Furthermore, Onno discloses connecting the host terminal to an optical network unit by employing the transmission line (the terminals are connected to an optical network element (see columns 2 and 3 and figures 1-3)).

Referring to claims 21 and 34, Onno discloses system for asynchronously transporting narrowband and broadband transmissions over a link (narrowband and broadband data is transmitted over a link in ATM format (see figures 1-3 and column 1)) comprising at least one host terminal for receiving communications from and transmitting communications to a back plane (a narrow band terminal transmits and receives communications over a communications line, which can be considered a backplane (see items T, To and B.TE (of figures 1 and 2)), at least one network unit coupled to the at least one host terminal by a transmission line (a broadband terminal is coupled to the narrowband terminal (see item B.TE of figure 2)) and the at least one host terminal and the at least one network unit each including a circuit pack for converting narrowband communications to and from composite asynchronous transfer mode (ATM) cells such that an entire bandwidth of the transmission line is available for both narrowband and broadband transmissions (data from the narrowband and broadband terminals is converted into ATM cells (see figure 1-3 and columns 1-3)).

Referring to claims 28 and 39, Onno discloses the system discussed above. Furthermore, Onno discloses that the circuit pack includes a broadband interface for converting broadband signals to and

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from the composite asynchronous transfer mode (ATM) cells (broadband signals are converted into ATM cells (see items B.TE and B.TA in figure 2)).

Referring to claims 29 and 40, Onno discloses the system discussed above. Furthermore, Onno discloses that the circuit pack includes a multiplexer for addressing information between a narrowband and a broadband interface (the circuit used for converting the narrowband data into ATM cells includes a multiplexer (see item 60 in figure 8)).

Referring to claims 30 and 41, Onno discloses the system discussed above. Furthermore, Onno discloses that the network unit is co-located with a service subscriber (the broadband terminal is located with a subscriber service (see figure 2)).

Referring to claims 31 and 42, Onno discloses the system discussed above. Furthermore, Onno discloses that the composite ATM cells include header information employed for directing the composite ATM cells to a destination (the ATM standard defines ATM cells as having headers that contain identifiers (VCI and VPI) that are used for directing the cells to their destinations).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-5,8,9,12-15,18,19,22-25,27,32,33,35-38,43 and 44, are rejected under 35 U.S.C. 103(a) as being unpatentable over Onno in view of Hiller et al. (USPN 5,327,421), hereafter referred to as Hiller.

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Referring to claims 2,12,22 and 35, Onno discloses the system discussed above. Furthermore, Onno discloses that the composite ATM cells include pairs of ATM cells (the ATM cells include signaling and corresponding information cells (see figure 8 and 9 and columns 7 and 8)) and further comprising the step of constructing a first composite cell of the pair, which includes data for a plurality of channels and a second composite cell of the pair which includes signaling information associated with each of the plurality of channels (the ATM cells include signaling and corresponding information cells (see figure 8 and 9 and columns 7 and 8)). Onno does not disclose that the ATM cells comprise a plurality of channels. However, Hiller discloses a system where a plurality of narrowband telephony channels are converted into ATM cells (see abstract)). It would have been obvious to one skilled in the art at the time of the invention to have the Onno system convert and communicate a plurality of channels, as taught in Hiller, because doing so would allow more subscribers to be serviced, thus increasing the system capacitance and versatility.

Referring to claims 3,13 and 23, Onno discloses the system discussed above. Furthermore, Onno discloses that each pair of cells is logically linked to reassemble the data and the signaling information for each channel (inherently, the signaling of the channels is linked to its corresponding information cells so that the receiving end can properly process the signal (see figures 1-3 and 8 and 9 and columns 2,3,7 and 8)).

Referring to claims 4,5,14,15,24,25,36 and 37 Onno discloses the system discussed above. Furthermore, Onno discloses that the first composite ATM cell of each pair includes voice telephony data of the first composite ATM cell (the narrow band data is of the N-ISDN protocol with includes voice data (see column 1)) and signaling information associated with the channel in the second composite ATM cell of each pair (the associated signaling of the N-ISDN information is also converted into ATM cells (see columns 1,7 and 8 and figures 1-3, 8 and 9)). Onno does not disclose that the ATM cells comprise a plurality of channels of the telephony data. However, Hiller discloses a system where a plurality of

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narrowband telephony channels are converted into ATM cells (see abstract)). It would have been obvious to one skilled in the art at the time of the invention to have the Onno system communicate a plurality of channels in the ATM cells, as taught in Hiller, because doing so would allow more subscribers to be service, thus increasing the system capacitance and versatility. Note, referring to claim 5, Onno discloses that the first composite ATM cells is converted ISDN data (see column 1 and figures 1-3)).

Referring to claims 8,9,18,19,32,33,43 and 44, Onno discloses the system discussed above. Furthermore, Onno discloses that composite ATM cells include a first composite cell (the data for the ISDN channel is converted into ATM cells (see figures 1-3 and columns 2 and 3)), a second composite cell which includes signaling information associated with each of the plurality of channels (the signaling of the corresponding channels is also converted into ATM cells (see columns 7 and 8 and figure 8 and 9)). Onno does not disclose that the information in the cells is from a plurality of channels or of a third cell containing the associated messaging of the channels. Hiller discloses a system where a plurality of narrowband telephony channels and their associates messaging are converted into ATM cells (see abstract)). It would have been obvious to one skilled in the art at the time of the invention to have the Onno system communicate a plurality of channels and their associated messaging in the ATM cells, as taught in Hiller because doing so would allow more subscribers to be service, thus increasing the system capacitance and versatility.

Referring to claims 27 and 38, Onno discloses the system discussed above. Onno does not disclose that the circuit pack includes a narrowband interface for converting pulse modulated signals to and from the composite asynchronous transfer mode (ATM) cells. However, Hiller discloses a system wherein PCM signals are converted into ATM cells (see abstract)). It would have been obvious to one skilled in the art at the time of the invention to convert PCM signals into the ATM cells, as taught in Hiller, because PCM is an established technique for converting voice calls into digital data. Since ATM

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cells comprise digital data, it would have been obvious to use the already established PCM technique for converting voice calls from an analog telephone in Onno into digital signals for the ATM cells.

6. Claims 6 and 16, are rejected under 35 U.S.C. 103(a) as being unpatentable over Onno.

Referring to claims 6 and 16, Onno discloses the system discussed above. Onno does not disclose that the ATM cells are transferred periodically. However, It would have been obvious to one skilled in the art at the time of the invention to transmit the cells of Onno periodically because doing so would help improve timing of the system. Furthermore, Onno does not disclose that the first composite cells transmitted each period and the second is transmitted every fourth period. However, it would have been obvious to one skilled in the art at the time of the invention to transmit the cells of Onno in the manner because doing do is merely a matter of design choice.

Response to Arguments

7. Applicant's arguments filed 03/01/2004 have been fully considered but they are not persuasive.

On pages 13 and 14 regarding the 35 USC 102 and 103 rejections, the Applicant argues that Onno does not teach converting narrowband transmissions into *composite* ATM cells adapted to carry both narrowband and broadband data for transmission on the same link. The Examiner respectfully disagrees. The claims do not recite that each ATM cell carries both narrowband and broadband data in the same cell. The claims merely recite that narrowband and broadband ATM cells are transmitted on the same line. Onno clearly teaches this. Specifically, in figure 2 Onno shows that broadband network terminal B.NT2 receives narrowband cells from N.TA and broadband cells from terminal B.TA and TE and transports cells from all of these

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terminals over optical line Tb. Note, the term 'composite' has been interpreted broadly and can have a number of different meanings. For example, each ATM cell can be considered 'composite' because they are a composition of a header and a payload.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Odland, who can be reached at (703) 305-3231 on Monday – Friday during the hours of 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached at (703) 305-4744. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist, who can be reached at (703) 305-4750.

deo

May 14, 2004

A handwritten signature in black ink, appearing to read 'J. Pezzlo', with a stylized, cursive script.

**JOHN PEZZLO
PRIMARY EXAMINER**